



STATEMENT OF BASIS
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BAQ Air Permitting Division

Company Name	The Boeing Company	Permit Writer:	James Myers
Permit Number:	TV-0560-0372	Date:	DRAFT

DATE APPLICATION RECEIVED: October 5, 2017

DATE OF LAST INSPECTION: June 6, 2017, No violations of permit requirements or applicable regulations were observed during this inspection.

FACILITY DESCRIPTION

The facility consists of three assembly buildings Aft (88-19), Mid-Body (88-20) and Final Assembly (88-30), an administrative/training building, referred to as "The Hub" (88-21), a paint building (88-22), Welcome Center (88-33), Delivery Center (88-88) and Site Support Building (88-32). There are also various flightline support buildings and crew shelters as well as a Jet Fuel Farm. This facility manufactures the mid-body and aft fuselage sections of the 787.

PROJECT DESCRIPTION

This project is for the facility's initial Title V operating permit.

COLLOCATION DETERMINATION This facility is not considered collocated with Boeing Interiors Responsibility Center South Carolina (0560-0415); see letter from Department to facility dated September 01, 2010.

CHANGES SINCE LAST OP ISSUANCE

Construction CF increased the throughput of Buildings 88-19, 88-20, 88-22, 88-30, and the addition of Building 88-188. Following the construction, the facility is now a Title V major source for volatile organic compounds (VOC). The facility only installed three of the 4 boilers (HEATWB 1-3) and did not install HOTWB from construction CF. The facility will also be a major source for NO_x and CO if this equipment is installed.

Small boilers that were listed as exempt sources will be permitted equipment since the facility is a major source for HAPs and these sources are subject to the boiler MACT. These sources are: IA-19-1-88-22, IA-19-2-88-22, IA-19-3-88-22, IA-19-4-88-22, IA-19-5-88-22, IA-19-6-88-22, IA-19-7-88-22, IA-19-8-88-22. The names will be changed respectively to: PBB1-88-22, PBB2-88-22, PBB3-88-22, PBB4-88-22, PBB5-88-22, PBB6-88-22, PBB7-88-22, PBB8-88-22

The following Table is a comparison of the conditions in the State Operating Permit and the new Title V Operating Permit:

State OP	Title V	Comments
C.1	C.2	62.1 Section II.J.1.g general record keeping condition
---	C.1	Equipment capacities in tables not limits general condition
C.2	E.3	Emergency generators exemption.
C.3	C.3	Continuous monitoring general condition
C.4	C.4	Gauge accessibility
C.5	C.5	Std. 1 opacity, PM and SO ₂ limit and fuel type limit
C.6	C.6	Std. 4 opacity
---	C.7	Std. 4 opacity monitoring
C.7	C.8	Std. 4 PM
C.8	---	Standard 5.1 for vaporizers. Regulation repealed.
C.9	C.9	Standard 5.2
C.10	C.10	Dry filter monitoring for paint booths.



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State OP	Title V	Comments
C.11	C.11	NSPS A and Dc general applicability. The autoclave installed in 2006 (AC-1-88-19) was declared not subject to Dc because it did not meet the definition of a steam generating unit according to the statement of basis (SOB). In 2015, the SOB for CF stated the autoclave was reevaluated and subject to Dc. This Title V application also refers to the source as a boiler providing heat to an autoclave. Since the definition for a steam generating unit refers to the heating of any heat transfer media, this autoclave is subject to this Standard.
C.12	---	Facility Wide VOC record keeping to verify emissions <100. Condition no longer applies.
C.13	---	Facility Wide HAP record keeping to verify emissions <10/25. Condition no longer applies.
C.14	C.12	Flexibility for paint changes.

SPECIAL CONDITIONS, MONITORING, LIMITS

Condition 12 of the Title V permit allowing the facility to change paint formulations if new construction is not required.

FACILITY WIDE EMISSIONS**		
Pollutant	Uncontrolled Emissions	Controlled/Limited Emissions
	TPY	TPY
Particulate Matter (PM)	43.28	8.07
Particulate Matter <10 Microns (PM ₁₀)	43.28	8.07
Particulate Matter <2.5 Microns (PM _{2.5})	43.28	8.07
Sulfur Dioxide (SO ₂)	0.63	No Control
Nitrogen Oxides (NO _x)	49.66	No Control
Carbon Monoxide (CO)	88.45	No Control
Total Volatile Compounds (VOC)	398.28	No Control
VOC (Non- Fugitive)	147.35	No Control
VOC (Fugitive)	250.94	No Control
Lead (Pb)	2.26E-04	No Control
Total HAP*	47.48	44.45
Highest HAP - MIBK	17.59	No Control
Antimony	0.82	0.002
Cadmium	0.14	0.0003
Chromium	0.82	0.002
Manganese	0.82	0.002
Nickel	0.27	0.0005
Xylene	9.87	No Control
Ethyl Benzene	1.62	No Control
Methanol	1.67	No Control
Toluene	10.98	No Control
Acrylic Acid	0.002	No Control
Phosphoric Acid	0.001	No Control



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FACILITY WIDE EMISSIONS**		
Pollutant	Uncontrolled Emissions	Controlled/Limited Emissions
	TPY	TPY
Hexane	2.02	No Control
Ethyl Glycol	0.035	No Control
Glycol Ethers	0.316	No Control
Phenol	0.025	No Control
Diethanolamine	0.0023	No Control
Ethanolamine	0.0099	No Control
HDI	0.316	No Control
Hydroquinone	0.0021	No Control
2-Nitro Propane	0.003	No Control
Nitric Acid	0.003	No Control
Styrene	0.0001	No Control
Dibutyl Phthalate	0.0003	No Control
Sodium Hydroxide	0.01	No Control
Nitric Acid	0.004	No Control

* Only includes process HAPs.

** Emissions from individual sources are specifically listed in Appendix E of the application. The table does not include Insignificant Activities. The following table lists emissions from List A Insignificant Activities provided by the facility and estimated emissions from List B sources estimated using AP42 factors. The Insignificant Activities are listed on pages 18—26 of the application.

Insignificant Activities	PM	SO₂	NO_x	CO	VOC
List A	3.68E-02	---	---	---	7.94
List B	2.77	0.67	36.89	26.22	2.24

OPERATING PERMIT STATUS

This facility operates under a state operating permit issued on July 23, 2007; expired on June 30, 2017. The facility is now a major source and will receive a Title V operating permit.

REGULATORY APPLICABILITY REVIEW	
Regulations	Comments/Periodic Monitoring Requirements
Section II.E – Synthetic Minor	Not Applicable: There are no synthetic minor limits.
Standard No. 1	Unit ID 01: AC-1-88-19, AC-2-88-19, VP-88-19 Unit ID 03: FAB-1-88-22, FAB-2-88-22, FAB-3-88-22, FAB-4-88-22, PBB1-88-22, PBB2-988-22, PBB3-88-2, PBB4-88-22, PBB5-88-22, PBB6-88-22, PB6-88-22, PBB7-88-22, PBB8-88-22, HWB-1-88-22, HWB-2-88-22, HWB-3-88-22, HWB-4-88-22, HWB-5-88-22, HWB-6-88-22 Unit ID 05: HEATWB1-88-188, HEATWB2-88-188, HEATWB3-88-188



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REGULATORY APPLICABILITY REVIEW

Regulations	Comments/Periodic Monitoring Requirements										
	These sources are subject to the opacity, PM, and SO2 limits of this Standard. Compliance will be by burning natural gas only.										
Standard No. 3 (state only)	Not Applicable: There are no waste combustion sources at this facility.										
Standard No. 4	<p>Unit ID 01: AC-1-88-19, AC-2-88-19, HW-88-19: This equipment is subject to the 20% opacity limit. There are no process particulate emissions. The autoclaves do not burn a solid fuel. The boilers which are part of the autoclave equipment are indirectly fired and that portion is subject to Standard 1. VP-88-19: This equipment is indirectly fired and subject to Standard 1.</p> <p>Unit ID 02: (A-88-20, HW-88-20): This equipment is subject to the 20% opacity limit. There are no process particulate emissions.</p> <p>Unit ID 03: (FAB-1-88-22, FAB-2-88-22, FAB-3-88-22, FAB-4-88-22, PSMN-88-22, PSMS-88-22, PB1-88-22, PB2-88-22, PB3-88-22, PB4-88-22, PB5-88-22, PB6-88-22, PBEO-88-22): This equipment is subject to the 20% opacity limit. There are process particulate emissions from the paint booths (PB1-88-22, PB2-88-22, PB3-88-22, PB4-88-22, PB5-88-22, PB6-88-22, PBEO-88-22). The paint booths are based on the number of shipsets processed per month which results in a maximum process weight rate of 34.15 tons per hour. No controls are necessary to comply with this limit since uncontrolled emissions are less than the limit:</p> <table><tr><th>Process</th><th>Max Process Weight rate (ton/hr)</th><th>Limit (lb/hr)</th><th>Uncontrolled Emissions</th><th>Controlled Emissions</th></tr><tr><td>Paint Booths</td><td>34.15</td><td>41.1</td><td>4.08</td><td>0.0082</td></tr></table> <p>Unit ID 04: (HW-88-30, CR-TL-88-30, CR-0612-88-30, CS-CCO-88-30) This unit has no PM emissions and is subject to the 20% opacity limit.</p> <p>Unit ID 05: (P01-88-188, P02-88-188) Although there is process PM from this painting operation, it was determined in construction permit 0560-0372-CF that the process weight rate of a completed airplane would result in an unrealistic process weight rate and excessive allowable PM rate. A Standard 4 PM limit was not established. (HEATWB1-88-188, HEATWB2-88-188, HEATWB3-88-188) These hot water boilers are defined as fuel burning operations and not subject to this Standard.</p>	Process	Max Process Weight rate (ton/hr)	Limit (lb/hr)	Uncontrolled Emissions	Controlled Emissions	Paint Booths	34.15	41.1	4.08	0.0082
Process	Max Process Weight rate (ton/hr)	Limit (lb/hr)	Uncontrolled Emissions	Controlled Emissions							
Paint Booths	34.15	41.1	4.08	0.0082							
Standard No. 5	(Not Applicable) The facility was not in existence in 1979 or 1980.										
Standard No. 5.2	The following boilers are subject to the 0.036 lb/MillionBTU limit for boilers and are equipped with low NOx burners: AC-1-88-19, AC-2-88-19, VP-88-19, HEATWB1-88-188, HEATWB2-88-188, HEATWB3-88-188. The boilers are subject to the tune-										



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REGULATORY APPLICABILITY REVIEW	
Regulations	Comments/Periodic Monitoring Requirements
	<p>up requirements of 40 CFR 63 Subpart DDDDD which will meet the requirements of Section IV(3).</p> <p>The air preheaters (FAB-1-88-22 – FAB-4-88-22) are not subject to this Standard since they are listed on the Regulation 61-62.1, Section II(B), Exemptions:</p> <p>6. Others:</p> <p>i. Sources with a total uncontrolled PTE of less than five (5) tons per year each of particulates, sulfur dioxide, nitrogen oxides, and carbon monoxide;</p>
Standard No. 7	The facility is not a major source for any PSD pollutant. Although the total VOCs exceed 250 tons per year, the facility is not one of the source categories required to count the fugitive emissions. The non-fugitive VOC emissions are <250 tpy.
61-62.6	(Not Applicable) This facility does not have fugitive particulate matter.
40 CFR 60 and 61-62.60	<p>Subpart Dc (Applicable) This facility has sources subject to Subparts A (General Provisions) and Dc (Standards Of Performance For Small Industrial-Commercial-Institutional Steam Generating Units).</p> <p>These sources (AC-1-88-19, AC-2-88-19, VP-88-19, HEATWB1-88-188, HEATWB1-88-188, HEATWB2-88-188, HEATWB3-88-188) are subject to Subpart Dc. Compliance with this Subpart will be demonstrated by burning only natural gas and keeping monthly records of natural gas consumption.</p> <p>All other boilers are not subject based on capacity (<10 Million Btu/hr).</p> <p>Subpart IIII (Applicable) This facility has numerous compression ignition emergency generators subject to the requirements of this Standard.</p>
40 CFR 61 and 61-62.61	The facility does not have emission sources that are subject to NESHAPs found in this regulation.
40 CFR 63 and 61-62.63	<p>The facility is a major source for HAPs and is subject to the following Subparts:</p> <p>GG (Aerospace Manufacturing and Rework Facilities)</p> <p>ZZZZ (Reciprocating Internal Combustion Engines)</p> <p>DDDDD (Industrial, Commercial, and Institutional Boilers at Major Sources)</p>
61-62.68	(Not Applicable) This facility does not use or store any chemicals listed above given thresholds.
40 CFR 64 (CAM)	(Not Applicable) The facility uses control devices for particulates; however, the pre-controlled emissions are not major and the controls are not required for any limits.



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AMBIENT AIR STANDARDS REVIEW	
Regulations	Comments/Periodic Monitoring Requirements
Standard No. 2	Modeling was performed with construction CF. This was the latest construction that caused the facility to become a major Title V source. No changes have occurred and a new modeling demonstration is not required. See modeling summary dated 01/09/15.
Standard No. 7.c	Modeling was performed with construction CF. This was the latest construction that caused the facility to become a major Title V source. No changes have occurred and a new modeling demonstration is not required. See modeling summary dated 01/09/15.
Standard No. 8 (state only)	Modeling was performed with construction CF. This was the latest construction that caused the facility to become a major Title V source. No changes have occurred and a new modeling demonstration is not required. See modeling summary dated 01/09/15.

PUBLIC NOTICE

This Title V Permit will undergo a 30-day public notice period and a 45-day EPA comment period in accordance with SC Regulation 61-62.1, Section II.N and SC Regulation 61-62.70.7(h). The comment period was open from August 21, 2018 to September 19, 2018 and was placed on the BAQ website during that time period.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.